

WHAT IS CLAIMED IS:

1. A body frame damping structure in a saddle-type vehicle comprising:

- a front fork steerably supported at a front end portion of a body frame;
- a front wheel supported at lower end portions of the front fork;
- a rear arm pivotally supported at a rear portion of the body frame by a pivot support shaft so as to be swingable up and down;
- a rear wheel supported at a swinging end of the rear arm; and
- means for generating a damping force disposed so as to bridge a first portion of the body frame with a second portion of the body frame, with means for generating a damping force being respectively coupled to the first and second portions of the body frame.

2. The body frame damping structure in a saddle-type vehicle of claim 1, wherein the body frame includes:

- a head pipe, which configures the front end portion of the body frame and supports the front fork;
- and a frame body, which extends rearward and downward from the head pipe and pivotally supports the rear arm at extension portions of the frame body, the frame body being disposed with linear portions that extend substantially straight and
- means for generating a dumpings force disposed at outward vicinities of the linear portions so as to extend along the linear portions.

3. The body frame damping structure in a saddle-type vehicle of claim 1, wherein the frame body comprises a pair of left and right frame body and

the means for generating a damping force is disposed so as to extend in a width direction of the vehicle and bridge the left and right frame bodies, with the means for generating a damping force being coupled to the frame bodies.

4. A body frame damping structure in a saddle-type vehicle including:

a front fork steerably supported at a front end portion of a body frame;

a front wheel supported at lower end portions of the front fork;

a rear arm pivotally supported at a rear portion of the body frame by a pivot support shaft so as to be swingable up and down;

a rear wheel supported at a swinging end of the rear arm, the body frame including:

a head pipe, which configures the front end portion of the body frame and supports the front fork;

a frame body, which extends rearward and downward from the head pipe and pivotally supports the rear arm at extension portions of the frame body;

and a seat bracket, which projects rearward from the frame body and supports a seat; and

means for generating a damping force disposed so as to bridge the frame body and the seat bracket, with the means for generating a damping force being respectively coupled to the frame body and the seat bracket.

5. A body frame damping structure in a saddle-type vehicle including:

a front fork steerably supported at a front end portion of a body frame;

a front wheel supported at lower end portions of the front fork;

a rear arm pivotally supported at a rear portion of the body frame by a pivot support shaft so as to be swingable up and down; and  
a rear wheel supported at a swinging end of the rear arm;  
the body frame including:

a head pipe, which configures the front end portion of the body frame and supports the front fork;

a frame body, which extends rearward and downward from the head pipe and pivotally supports the rear arm at extension portions of the frame body;

and an internal combustion engine, which is supported at the frame body and is interlocked and coupled with the rear wheel; and  
means for generating a damping force disposed so as to bridge the frame body and the internal combustion engine, with means for generating a damping force being respectively coupled to the frame body and the internal combustion engine.

6. The body frame damping structure in a saddle-type vehicle of any one of claim 1, wherein the means for generating a damping force damps an impact force applied in one direction with respect to the means for generating a damping force and an impact force applied in a direction opposite to the one direction.

7. The body frame damping structure in a saddle-type vehicle of claim 2, wherein the means for generating a damping force damps an impact force applied in one direction with respect to the means for generating a damping force and an impact force applied in a direction opposite to the one direction.

8. The body frame damping structure in a saddle-type vehicle of claim 3, wherein the means for generating a damping force damps an impact force applied in one direction with respect to the means for generating a damping force and an impact force applied in a direction opposite to the one direction.

9. The body frame damping structure in a saddle-type vehicle of claim 4, wherein the means for generating a damping force damps an impact force applied in one direction with respect to the means for generating a damping force and an impact force applied in a direction opposite to the one direction.

10. The body frame damping structure in a saddle-type vehicle of claim 5, wherein the means for generating a damping force damps an impact force applied in one direction with respect to the means for generating a damping force and an impact force applied in a direction opposite to the one direction.

11. A body frame damping structure in a saddle-type vehicle comprising:

a front fork steerably supported at a front end portion of a body frame;

a front wheel supported at lower end portions of the front fork;

a rear arm pivotally supported at a rear portion of the body frame by a pivot support shaft so as to be swingable up and down;

a rear wheel supported at a swinging end of the rear arm; and

dampers disposed so as to bridge a first portion of the body frame with a second portion of the body frame, with dampers being respectively coupled to the first and second portions of the body frame.

12. The body frame damping structure in a saddle-type vehicle of claim 11, wherein the body frame includes:

a head pipe, which configures the front end portion of the body frame and supports the front fork, and

a frame body which extends rearward and downward from the head pipe and pivotally supports the rear arm at extension portions of the frame body,

the frame body being disposed with linear portions that extend substantially straight, and

the dampers are disposed at outward vicinities of the linear portions so as to extend along the linear portions.

13. The body frame damping structure in a saddle-type vehicle of claim 11, wherein the frame body comprises:

a pair of left and right frame bodies, and

the dampers are disposed so as to extend in a width direction of the vehicle and bridge the left and right frame bodies, with the dampers being coupled to the frame bodies.

14. The body frame damping structure in a saddle-type vehicle of claim 11, wherein the dampers damp an impact force applied in one direction with respect to the dampers and an impact force applied in a direction opposite to the one direction.

15. The body frame damping structure in a saddle-type vehicle of claim 11, wherein the dampers are cylinder-format dampers that use a fluid.

16. The body frame damping structure in a saddle-type vehicle of claim 15, wherein the fluid is oil.

17. The body frame damping structure in a saddle-type vehicle of claim 13, further comprising couplers disposed with a bracket that is fastened by a fastener and supported by an outer side surface of the frame bodies.

18. The body frame damping structure in a saddle-type vehicle of claim 17, wherein the pivot support shaft pivotally supports end portions of each damper at the brackets.

19. The body frame damping structure in a saddle-type vehicle of claim 11, wherein the dampers are disposed in a cylinder tube.

20. The body frame damping structure in a saddle-type vehicle of claim 19, further comprising oil chambers disposed in the cylinder tube, wherein the oil chambers are partitioned by a piston.